

Alumnus to deliver Samuel R. Scholes Jr. Lecture on nanotechnology

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Alumnus Dr. Terry Michalske, a 1975 graduate of Alfred University and founding director for the Department of Energy/Center for Integrated Nanotechnologies as well as head of the Integrated Nanotechnologies Department at Sandia National Laboratories in Albuquerque, NM, will deliver the seventh annual Samuel R. Scholes Jr. Lecture at 8 p.m. April 11, in Nevins Theatre, Powell Campus Center on the AU campus. His topic is "Integrating Nanotechnology: Putting Small Things to Work." "The world of the ultra-small, nanotechnology, is driving a world-wide revolution of scientific exploration and it is providing many tantalizing opportunities for new technology that can impact everything from healthcare to our global energy needs," said Michalske. "I'm absolutely thrilled to be coming back to Alfred speak about this fascinating topic." The choice of Michalski and the topic for his talk are particularly apt for Alfred University: Earlier this month, Kyocera Corporation announced a \$10 million gift to the School of Engineering. The University intends to use a portion of the income from the endowment to hire up to four new faculty members to create a nanotechnology research center with a focus on biomaterials and photonics. The school will become the Kazuo Inamori School of Engineering in honor of Kyocera's founder, Dr. Kazuo Inamori. AU Trustee Dr. Joshua Fierer, a 1959 graduate, created the Samuel R. Scholes Jr. Lecture in honor of his long-time mentor and friend. Scholes came to Alfred in 1932 when his father joined the faculty of the College of Ceramics at Alfred University. A 1937 graduate of Alfred University, the younger Scholes earned a Ph.D. degree from Yale University. He returned to Alfred in 1946 as a member of the faculty in the chemistry department, where he taught until his retirement in 1980. "I owe a great debt to Prof. Scholes, Jr. and many others at Alfred who dedicated their careers to enriching the student's lives with knowledge," said Michalske. "Their patience and inspiration has opened doors for me that, as a struggling student in freshmen chemistry, were beyond my ability to imagine." Michalske received his Ph.D. in Ceramic Science from AU in 1979 and was then awarded a National Research Council Postdoctoral fellowship to work at the National Institute of Standards and Technology. In 1981, Michalske joined Sandia National Laboratories as a member of the technical staff in the Ceramics Division. His technical interests are in the areas of interfacial phenomena, nanoscale properties of materials, and integrated microsystems. Michalske's work on the stress corrosion fracture of silica has been recognized by several international awards including the Ross Coffin Purdy Award (1985) and the Weyl International Glass Science Award (1989). He has developed several new programs using scanning probe microscopy to explore the nanometer-scale response of surfaces and interfaces. He is co-recipient of an R&D 100 Award (1994) for development of the Interfacial Force Microscope. Michalske's current responsibilities include directing technical programs that address the molecular-scale origins of lubrication and wear, self-assembled nanocomposites and the development of integrated chemical micro-systems. He has organized several international conferences including the Gordon Conference on Solid State Studies in Ceramics (1990) and the 1997 SPIE Symposium on Micromachining and Imaging and is co-editor of the proceedings from the 4th International Conference on Nanometer-Scale Science and Technology, NANO IV (1996). He currently serves on committees for the National Institutes of Health, National Science Foundation, and the Department of Energy that are charged with setting investment priorities for the U.S. National Nanotechnology Initiative. Michalske sits on external advisory boards for several university materials science departments and nanoscience centers and is a fellow of the American Ceramic Society and the American Vacuum Society. Michalske and his wife, Susan Knab Michalske '79, now reside in Cedar Crest, NM.